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10/595,310	04/06/2006	Akio Yamashita	12732-329US1 PCTUS7433	7163
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EXAMINER				
CHAN, SING P				
ART UNIT		PAPER NUMBER		
1791				
NOTIFICATION DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

### Office Action Summary

**Application No.**

10/595,310

**Applicant(s)**

YAMASHITA ET AL.

**Examiner**

SING P. CHAN

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 14-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-10 and 14-26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5, 7, 10-12, 15, 16, and 22-27 of copending Application No. 10/577,648. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-26 of instant application are generic to the method recited in claims 1-5, 7, 10-12, 15, 16, and 22-27 of copending application of 10/577,648. That is, claims 1-5, 7, 10-12, 15, 16, and 22-27 of copending application of 10/577,648 falls entirely within the scope of claims 1-26 of instant application or in other words, claims 1-26 of instant application are anticipated by claims 1-5, 7, 10-15, 16, and 22-27 of copending application

10/577,648. Specifically, claims 1-26 of instant application do not recited the additional steps of claims 1-5, 7, 10-15, 16, and 22-27 of copending application but since the instant claims are open claims and therefore allow for additional steps, which the claims of the copending application are more specific than the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 7, 10, and 14-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites "attaching a second substrate by using a first adhesive material" but is unclear as to what is the second substrate is attached, with the first adhesive material. For the purpose of examination, "attaching a second substrate to the optical filter by using a first adhesive material" will be assumed.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1, 3, 5, 7, 10, 17, and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenfeld et al (U.S. 5,156,720) in view of Faris (U.S. 5,096,520) and optionally Allen et al (U.S. 6,057,961).

Regarding claims 1, 7, 10, and 17, Rosenfeld et al discloses a method of producing released vapor deposited films. The method includes providing a substrate of foil, sheet, or plate of an inexpensive co-anodizable metal such as aluminum (Col 4, lines 35-39) depositing a valve metal layer by sputtering, evaporation, and etc. onto the substrate (Col 4, lines 40-43), anodizing the valve metal layer to form a layer of metal oxide layer on the valve metal layer (Col 3, lines 57-59), applying at least one additional layer of material such as oxides, nitrides, carbides, which would act as insulating layer, onto the valve metal oxide layer (Col 4, lines 53-56), for an optical multilayer film or filter, alternating layers of dielectric material with high and low refractive index are applied to the valve metal oxide layer (Col 5, lines 53-66), attaching a material to the outer surface of the releasable films or layers with adhesive and peeling the film or layer from the valve metal layer with the separation between the valve metal layer and the metal oxide layer and the adhesive used for adhering the material such as polymer,

paper, textiles, and wood are one which can be readily removed from the layers such as soluble polymer or one which can be oxidized or decomposed by irradiation to release or detach the release film (Col 4, line 62 to Col 5, line 18) or heat sealable polymer (Col 5, lines 15-18) to allow the peeling of the attached material, and finally transfer to a final substrate after peeling from the attached material (Col 3, lines 34-42). The material is a support medium with the adhesive acting as peelable adhesive agent. Furthermore, the optical films are supported on a plastic substrate (Col 5, lines 53-57) and comprise a stack of alternating layers of dielectric material, which are applied or formed on the valve metal layer (Col 5, lines 60-66), which satisfied the second substrate attached to the optical filter or subject body since the first optical film with the valve metal layer is a subject body and a first optical filter and any additional optical films applied to the first optical film satisfies the second substrate requirement. Rosenfeld et al as modified above is silent as to attaching or forming a second substrate with a second adhesive. However, providing adhesive to bond the optical filters to form a stack is well known and conventional as shown for example by Faris. Faris discloses a method of forming polarizing filter arrays. The method includes coating the polarizing film with a clear adhesive, stacking to form a stack and pressing to laminate films together (Col 3, lines 16-21 and Col 3, lines 43-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a clear adhesive for bonding the filter films together to form a stack as disclosed by Faris in the method of Rosenfeld et al to provide a means for forming filter arrays with minimum number of parts and number steps with increase

yield and performance and reduced cost. (See Faris, Col 2, lines 56-61) The examiner is providing optionally Allen et al which discloses using adhesive to bond various films, coatings, fabrics to the optical layers (See Allen et al, Col 20, line 54 to Col 21, line 63) to support the use of adhesive to apply additional film or coating to either or both sides of the optical film. Furthermore, one of ordinary skill in the art reading Rosenfeld et al and Allen et al would appreciate the additional coating, film or fabric can be applied to the optical film prior to applying the support material and peelable adhesive as well as peeling the releasable film from the first substrate and then applying the additional coating, film or fabric of Allen et al to the exposed surface, which are all obvious variants.

It would have been obvious to one ordinary skill in the art at the time the invention was made to provide additional coatings or films to either or both sides of the optical film as disclosed by Allen et al in the method of Rosenfeld et al as modified by Faris to improve or alter their physical or chemical properties (See Allen et al, Col 20, lines 24-25).

Regarding claims 3 and 19, Rosenfeld et al discloses the valve metal layer includes tantalum, niobium, zirconium, hafnium, titanium and alloy (Col 3, lines 52-61)

Regarding claims 5 and 20, Rosenfeld et al discloses the additional layer or layers deposited onto the metal oxide layer includes silicon dioxide or SiO<sub>2</sub> (Col 6, lines 62-66).

Regarding claims 21 and 23, Rosenfeld et al discloses the optical layers are formed into anti-reflective coatings, filters, and polarizer (Col 6, lines 5-15), but is silent as to the filters stack includes color filters. However, providing filter stack with color filters is well known and conventional as shown for example by Faris. Faris discloses a method forming polarizing filter stack. The method includes providing a polarizing filter material film, a substrate material, and a reflective film, forming a 3 color filter material onto the substrate sequentially and forming additional layers, applying adhesive to the laminated sheets and stack as many of them as necessary to form the filter stack. (Col 3, lines 17-46)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide color filters as part of a filter stack as disclosed by Faris in the method of Rosenfeld et al as modified by combination of references to provide a means for forming filter arrays with minimum number of parts and number steps with increase yield and performance and reduced cost. (See Faris, Col 2, lines 56-61)

Regarding claim 22, Rosenfeld et al discloses the substrate for supporting the optical films is a plastic substrate. (Col 5, lines 53-57)

Regarding claim 24, Rosenfeld et al discloses an opaque aluminum reflector layer or film with a final high index layer. (Col 6, lines 50-55)

8. Claims 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenfeld et al (U.S. 5,156,720) in view of Faris (U.S. 5,096,520) as applied to claim 7 above, and further in view of Herbots et al (U.S. 4,800,100).



Regarding claim 14, Rosenfeld et al as disclosed above is silent as to forming the metal oxide layer between the metal layer and the insulating layer simultaneously with the formation of the metal layer and the insulating layer. However, simultaneously forming layers films is well known and conventional as shown for example by Herbots et al. Herbots et al disclose a combined ion and molecular beam apparatus for depositing material. The method includes using the desired sequence of combined ion beams and molecular beam to thermally enhanced ion beam cleaning or molecular beam cleaning, followed by simultaneous deposition from the ion beam and molecular beam, followed by a switch of either or both beams to different species (Col 18, lines 15-29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a method simultaneously deposit layers of film with a combined ion beam and molecular beam deposition as disclosed by Herbots et al in the method of Rosenfeld et al to form layered films at a lower temperatures and higher rate. (See Herbots et al, Col 4, lines 44-51)

Regarding claim 18, Rosenfeld et al discloses the metal oxide layer will separate from the metal layer (Col 3, lines 29-33).

9. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenfeld et al (U.S. 5,156,720) in view of Faris (U.S. 5,096,520) as applied to claim 7 above, and further in view of Ghyselen et al (U.S. 6,867,067) and Ariyoshi et al (JP 53-31971).

Rosenfeld et al as disclosed above is silent as to either before or after forming the optical film, forming the metal oxide layer after forming the insulating layer or silicon

oxide layer. However, forming a metal oxide layer after forming a silicon oxide layer on a metal substrate is well known and conventional as shown for example by Ghyselen et al and Ariyoshi. Ghyselen et al discloses a method of forming a final substrate. The method includes providing a support of deposited metal (See Ghyselen et al, Col 3, lines 1-10), forming a bonding layer (10) of silicon oxide and implanting atomic or ionic species to form a zone of weakness (See Ghyselen et al, Col 5, lines 10-21), which as disclosed by Ariyoshi et al of implanting oxygen ions into a metal substrate and heating the substrate to form metal oxide layer (See Ariyoshi et al, English Abstract of JP 53-31971), which would form metal oxide layer in the zone of weakness of Ghyselen et al and allow separation of the layers of thin film (See Ghyselen et al, Col 5, lines 22-27). Furthermore, Ghyselen et al discloses the steps for forming the layers and implanting species can be performed in the order specified above or in another order, which for one of ordinary skill reading Rosenfeld et al, Ghyselen et al and Ariyoshi et al would appreciate the various layers of Rosenfeld et al can be deposited prior to implantation of the species and heating to form metal oxide layer, which is an obvious variant.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the various layers and using species implantation such as oxygen into the metal layer and heating to form a layer of metal oxide layer on the metal layer, which allow for separation as disclosed by Ghyselen et al and Ariyoshi et al in the method of Rosenfeld et al to provide a simpler and much less expensive means to forming final substrate for optics or optoelectronics. (See Ghyselen et al, Col 2, lines 40-46)

10. Claims 2, 4, 6, 8, 9, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenfeld et al (U.S. 5,156,720) in view of Shimizu et al (U.S. 4,934,791) and optionally Allen et al (U.S. 6,057,961).

Regarding claims 2, 8, 9, 25 and 26, Rosenfeld et al discloses a method of producing released vapor deposited films. The method includes providing a substrate of foil, sheet, or plate of an inexpensive co-anodizable metal such as aluminum (Col 4, lines 35-39) depositing a valve metal layer by sputtering, evaporation, and etc. onto the substrate (Col 4, lines 40-43), anodizing the valve metal layer to form a layer of metal oxide layer on the valve metal layer (Col 3, lines 57-59), applying at least one additional layer of material such as oxides, nitrides, carbides, which would act as insulating layer, onto the valve metal oxide layer (Col 4, lines 53-56), for an optical multilayer film or filter, alternating layers of dielectric material with high and low refractive index are applied to the valve metal oxide layer (Col 5, lines 53-66), attaching a material to the outer surface of the releasable films or layers with adhesive and peeling the film or layer from the valve metal layer with the separation between the valve metal layer and the metal oxide layer and the adhesive used for adhering the material such as polymer, paper, textiles, and wood are one which can be readily removed from the layers such as soluble polymer or one which can be oxidized or decomposed by irradiation to release or detach the release film (Col 4, line 62 to Col 5, line 18) or heat sealable polymer (Col 5, lines 15-18) to allow the peeling of the attached material, and finally transfer to a final substrate after peeling from the attached material (Col 3, lines 34-42). Furthermore, the transferring of the releasable film to a final substrate or second substrate would

inherently require an adhesive or glue and the examiner has provided optionally Allen et al which discloses using adhesive to bond various films, coatings, fabrics to the optical layers (See Allen et al, Col 20, line 54 to Col 21, line 63) to support the use of adhesive. Furthermore, one of ordinary skill in the art reading Rosenfeld et al and Allen et al would appreciate the additional coating, film or fabric can be applied to the optical film prior to applying the support material and peelable adhesive as well as peeling the releasable film from the first substrate and then applying the additional coating, film or fabric of Allen et al to the exposed surface, which are all obvious variants.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an adhesive to bond the various coatings, films or fabrics to either or both sides of the optical film or layers as disclosed by Allen et al in the method of Rosenfeld et al to improve or alter the optical film or layer physical or chemical properties. (See Allen et al, Col 120, lines 24-25) Rosenfeld et al as modified above is silent as to the optical film or filter includes a black matrix and a colored layer. However, provide a filter with a black matrix and colored layers is well known and conventional as shown for example by Shimizu et al. Shimizu et al discloses a color filter. The color filter includes color elements or layer form from pigment and a photosensitive resin and a black matrix (Col 2, lines 62-68).

It would have been obvious to one in the art at the time the invention was made to provide a colored filter with a black matrix as disclosed by Shimizu et al in the method of Rosenfeld et al as modified by Allen et al to provide a color filter which produces a

high precision pattern with a high surface smoothness and a good environmental resistance. (See Shimizu et al, Col 2, lines 25-29)

Regarding claim 4, Rosenfeld et al discloses the valve metal layer includes tantalum, niobium, zirconium, hafnium, titanium and alloy (Col 3, lines 52-61)

Regarding claim 6, Rosenfeld et al discloses the additional layer or layers deposited onto the metal oxide layer includes silicon dioxide or SiO<sub>2</sub> (Col 6, lines 62-66).

### ***Response to Arguments***

11. Applicant's arguments, see Page 8, line 14 to Page 9, line 17, filed January 21, 2009, with respect to the rejection(s) of claim(s) 1-10 and 14-26 under 35 USC 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Shimizu et al (U.S. 4,934,791), Faris (U.S. 5,096,520) and optionally Allen et al (U.S. 6,057,961) with Shimizu et al disclosing a color filter with a black matrix, Faris for disclosing adhesive for bonding optical filters to form laminated stack, and optionally Allen et al for disclosing coating or laminating additional layers, coating, or fabric to an optical filter.

### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SING P. CHAN whose telephone number is (571)272-1225. The examiner can normally be reached on Monday-Thursday 7:30AM-11:00AM and 12:00PM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip C. Tucker can be reached on 571-272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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